



Eastern Research Group  
601 Keystone Park Drive  
Suite 700  
Morrisville, NC 27560

December 21, 2018

Ms. Doris Chen & Lewis Weinstock  
U.S. Environmental Protection Agency - OAQPS  
109 T.W. Alexander Drive, Mail Code: C304-06  
RTP, NC 27709  
Project Name: EtO Region 5

Dear Ms. Doris Chen & Lewis Weinstock,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 11/27/18 10:19 through 12/03/18 11:19.

The test results in this report are in compliance with NELAC accreditation requirements for the certified parameters. All analyses were performed as described in the US EPA-approved QAPP, under the contract for UATMP, NATTS, CSATAM, PAMS and NMOC support (US EPA Contract No. EP-D-14-030). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7924.

Sincerely,

Julie Swift  
Program Manager  
[julie.swift@erg.com](mailto:julie.swift@erg.com)

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify [julie.swift@erg.com](mailto:julie.swift@erg.com) and delete the report without retaining any copies.



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

**ATTN:** Ms. Doris Chen & Lewis Weinstock

**PHONE:** (919) 541-4957 **FAX:** -

**FILE #:** 0344.00

**REPORTED:** 12/21/18 12:54

**SUBMITTED:** 11/27/18 to 12/03/18

**AQS SITE CODE:**

**SITE CODE:** EtO Region 5

### ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
WB Village Hall	8112702-13	Air	11/26/18 09:34	11/27/18 10:19
Gower MS	8112702-14	Air	11/26/18 09:42	11/27/18 10:19
Gower ES	8112702-15	Air	11/26/18 10:21	11/27/18 10:19
Hinsdale South HS	8112702-16	Air	11/26/18 10:16	11/27/18 10:19
Willow Pond Park	8112702-17	Air	11/26/18 10:03	11/27/18 10:19
WB Warehouse C1	8120321-01	Air	11/29/18 09:10	12/03/18 11:19
WB Warehouse C2	8120321-02	Air	11/29/18 09:09	12/03/18 11:19
Hinsdale South HS	8120321-03	Air	11/29/18 09:59	12/03/18 11:19
Watertower	8120321-04	Air	11/29/18 09:37	12/03/18 11:19
Willow Pond Park	8120321-05	Air	11/29/18 09:46	12/03/18 11:19
Gower ES	8120321-06	Air	11/29/18 10:09	12/03/18 11:19
West Neighborhood	8120321-07	Air	11/29/18 10:17	12/03/18 11:19
Gower MS	8120321-08	Air	11/29/18 09:27	12/03/18 11:19
WB Village Hall	8120321-09	Air	11/29/18 09:18	12/03/18 11:19

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: WB Village Hall

Lab ID: 8112702-13

Sampled: 11/26/18 09:34

Pressure @ Receipt: 3.00" Hg

Canister #: 5133

Received: 11/27/18 10:19

Comments: Start 09:15 11/25/18 Probe #10314

Analyzed: 12/21/18 00:36

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	2.27	4.10		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Gower MS

Lab ID: 8112702-14

Sampled: 11/26/18 09:42

Pressure @ Receipt: 2.00" Hg

Canister #: 5127

Received: 11/27/18 10:19

Comments: Start 09:27 11/25/18 Probe #10311

Analyzed: 12/20/18 08:34

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.199	0.36		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Gower ES

Lab ID: 8112702-15

Sampled: 11/26/18 10:21

Pressure @ Receipt: 4.00" Hg

Canister #: 5056

Received: 11/27/18 10:19

Comments: Start 10:15 11/25/18 Probe #10293

Analyzed: 12/20/18 09:34

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	ND	ND	U	0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Hinsdale South HS

Lab ID: 8112702-16

Sampled: 11/26/18 10:16

Pressure @ Receipt: 5.00" Hg

Canister #: 5033

Received: 11/27/18 10:19

Comments: Start 10:14 11/25/18 Probe #10076

Analyzed: 12/20/18 10:40

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.368	0.66		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Willow Pond Park

Lab ID: 8112702-17

Sampled: 11/26/18 10:03

Pressure @ Receipt: 1.90" Hg

Canister #: SAT037

Received: 11/27/18 10:19

Comments: Start 09:50 11/25/18 Probe #10294

Analyzed: 12/20/18 11:42

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.191	0.35		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: WB Warehouse C1

Lab ID: 8120321-01

Sampled: 11/29/18 09:10

Pressure @ Receipt: 2.50" Hg

Canister #: 5102

Received: 12/03/18 11:19

Comments: Col 1 Start 09:29 11/28/18 Probe #10314

Analyzed: 12/20/18 12:44

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.137	0.25		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: WB Warehouse C2

Lab ID: 8120321-02

Sampled: 11/29/18 09:09

Pressure @ Receipt: 3.00" Hg

Canister #: SAT094

Received: 12/03/18 11:19

Comments: Col 2 Start 09:29 11/28/18 Probe #10315

Analyzed: 12/20/18 14:23

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.631	1.14		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Hinsdale South HS

Lab ID: 8120321-03

Sampled: 11/29/18 09:59

Pressure @ Receipt: 4.00" Hg

Canister #: SAT054

Received: 12/03/18 11:19

Comments: Start 10:31 11/28/18 Probe #10076

Analyzed: 12/20/18 17:27

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.208	0.38		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Watertower

Lab ID: 8120321-04

Sampled: 11/29/18 09:37

Pressure @ Receipt: 2.50" Hg

Canister #: SAT023

Received: 12/03/18 11:19

Comments: Start 10:05 11/28/18 Probe #10312

Analyzed: 12/20/18 18:29

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.387	0.70		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Willow Pond Park

Lab ID: 8120321-05

Sampled: 11/29/18 09:46

Pressure @ Receipt: 3.00" Hg

Canister #: SAT173

Received: 12/03/18 11:19

Comments: Start 10:17 11/28/18 Probe #10294

Analyzed: 12/20/18 19:29

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.252	0.46		0.0453



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Gower ES

Lab ID: 8120321-06

Sampled: 11/29/18 10:09

Pressure @ Receipt: 3.00" Hg

Canister #: SAT074

Received: 12/03/18 11:19

Comments: Start 10:45 11/28/18 Probe #10293

Analyzed: 12/20/18 20:31

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.262	0.47		0.0453



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS  
109 T.W. Alexander Drive, Mail Code: C304-C  
RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: West Neighborhood

Lab ID: 8120321-07

Sampled: 11/29/18 10:17

Pressure @ Receipt: 3.00" Hg

Canister #: 19654

Received: 12/03/18 11:19

Comments: Start 10:55 11/28/18 Probe #10310

Analyzed: 12/20/18 21:34

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	ND	ND	U	0.0453



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: Gower MS

Lab ID: 8120321-08

Sampled: 11/29/18 09:27

Pressure @ Receipt: 2.00" Hg

Canister #: 5083

Received: 12/03/18 11:19

Comments: Start 09:53 11/28/18 Probe #10311

Analyzed: 12/20/18 22:36

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	0.363	0.66		0.0453



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Description: WB Village Hall

Lab ID: 8120321-09

Sampled: 11/29/18 09:18

Pressure @ Receipt: 2.10" Hg

Canister #: 18873

Received: 12/03/18 11:19

Comments: Start 09:40 11/28/18 Probe #10313

Analyzed: 12/20/18 23:36

### Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Ethylene oxide	1.01	1.82		0.0453

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 12/21/18 12:54

SUBMITTED: 11/27/18 to 12/03/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
---------	--------	-------	---------------	-----	-----------	-------

### Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B8L2003 - Summa Canister Prep

#### Blank (B8L2003-BLK1)

Prepared: 12/13/18 Analyzed: 12/20/18

Ethylene oxide	ND	ppbv				U
----------------	----	------	--	--	--	---

#### Duplicate (B8L2003-DUP1)

Source: 8120321-01

Prepared: 11/29/18 Analyzed: 12/20/18

Ethylene oxide	0.137	ppbv	0.14	0.00	25	
----------------	-------	------	------	------	----	--

#### Duplicate (B8L2003-DUP2)

Source: 8120321-02

Prepared: 11/29/18 Analyzed: 12/20/18

Ethylene oxide	0.584	ppbv	0.63	7.80	25	
----------------	-------	------	------	------	----	--

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

**ATTN:** Ms. Doris Chen & Lewis Weinstock

**PHONE:** (919) 541-4957 **FAX:** -

**FILE #:** 0344.00

**REPORTED:** 12/21/18 12:54

**SUBMITTED:** 11/27/18 to 12/03/18

**AQS SITE CODE:**

**SITE CODE:** EtO Region 5

Analyte	Result	Units	% Difference	Limit (%)	Notes
---------	--------	-------	--------------	-----------	-------

### Air Toxics by EPA Compendium Method TO-15 - Quality Control

*Sequence 1812045*

#### Calibration Check (1812045-CCV1)

Prepared & Analyzed: 12/20/18

Ethylene oxide	2.06	ppbv	-17.7	30.00
----------------	------	------	-------	-------

Eastern Research Group

*The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

**ATTN:** Ms. Doris Chen & Lewis Weinstock

**PHONE:** (919) 541-4957 **FAX:** -

**FILE #:** 0344.00

**REPORTED:** 12/21/18 12:54

**SUBMITTED:** 11/27/18 to 12/03/18

**AQS SITE CODE:**

**SITE CODE:** EtO Region 5

### Notes and Definitions

U	Under Detection Limit
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: The test results meet all requirements of NELAC; however the following analytes are not accredited: 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-butadiene, acetylene, acrolein, bromochloromethane, bromodichloromethane, bromoform, carbon disulfide, dibromochloromethane, dichlorodifluoromethane, dichlorotetrafluoroethane, ethyl acrylate, ethyl tert butyl ether, ethylene oxide, hexachloro-1,3-butadiene, octane, propylene, tert amyl methyl ether, tetrachloroethylene, trans-1,2-dichloroethylene, trichlorofluoromethane, and trichlorotrifluoroethane.